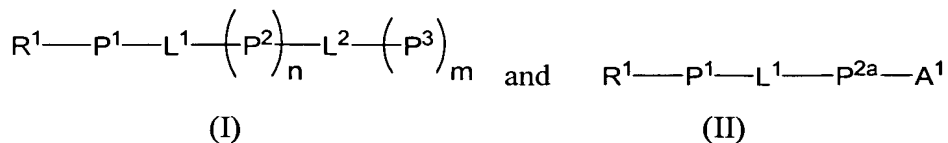


WHAT IS CLAIMED IS:

1 1. A method for inhibiting a soluble epoxide hydrolase, comprising
2 contacting said soluble epoxide hydrolase with an inhibiting amount of a compound having a
3 formula selected from the group consisting of:



6 and their pharmaceutically acceptable salts, wherein

7 R^1 is a member selected from the group consisting of C_5 - C_{12} cycloalkyl, aryl,
8 heteroaryl and combinations thereof, wherein said cycloalkyl portions are
9 monocyclic or polycyclic;

10 P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH-,
11 -OC(O)NH-, -NHC(O)O-, -CH₂C(O)NH-, -C(O)NH- and -NHC(O)-;

12 P^2 is a secondary pharmacophore selected from the group consisting of -C(O)-,
13 -CH(OH)-, -C(O)O-, -OC(O)-, -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-,
14 -C(O)NH- and -NHC(O)-;

15 P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)-;

16 P^3 is a tertiary pharmacophore selected from the group consisting of C_2 - C_6 alkynyl,
17 C_1 - C_6 haloalkyl, aryl, heteroaryl, -C(O)NHR², -C(O)NHS(O)₂R²,
18 -NHS(O)₂R², -C(O)OR² and carboxylic acid analogs, wherein R² is a member
19 selected from the group consisting of hydrogen, substituted or unsubstituted
20 C_1 - C_4 alkyl, substituted or unsubstituted C_3 - C_8 cycloalkyl, substituted or
21 unsubstituted aryl and substituted or unsubstituted aryl C_1 - C_4 alkyl;

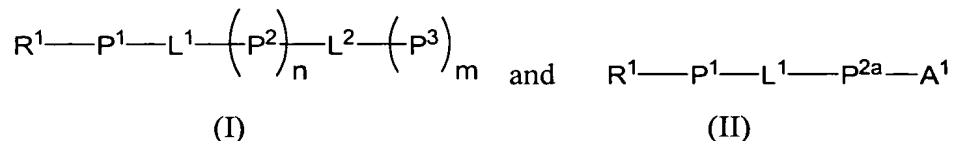
22 the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1;

23 L^1 is a first linker selected from the group consisting of substituted and unsubstituted
24 C_2 - C_6 alkylene, substituted or unsubstituted arylene and substituted or
25 unsubstituted heteroarylene;

26 L^2 is a second linker selected from the group consisting of substituted and
27 unsubstituted C_2 - C_{12} alkylene, substituted and unsubstituted arylene, and
28 combinations thereof; and

29 A^1 is a member selected from the group consisting of an amino acid, a dipeptide and a
30 dipeptide analog.

2. A method for inhibiting a soluble epoxide hydrolase, comprising contacting said soluble epoxide hydrolase with an inhibiting amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of $\text{C}_5\text{-C}_{12}$ cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , $\text{-CH}_2\text{C(O)NH-}$, -C(O)NH- and -NHC(O)- ;

P^2 is a secondary pharmacophore selected from the group consisting of -C(O)- , -CH(OH)- , $\text{-O(CH}_2\text{CH}_2\text{O)}_q\text{-}$, -C(O)O- , -OC(O)- , -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , -C(O)NH- and -NHC(O)- ;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)- ;

P^3 is a tertiary pharmacophore selected from the group consisting of $\text{C}_2\text{-C}_6$ alkynyl, $\text{C}_1\text{-C}_6$ haloalkyl, aryl, heteroaryl, -C(O)NHR^2 , $\text{-C(O)NHS(O)}_2\text{R}^2$, $\text{-NHS(O)}_2\text{R}^2$, -C(O)OR^2 and carboxylic acid analogs, wherein R^2 is a member selected from the group consisting of hydrogen, substituted or unsubstituted $\text{C}_1\text{-C}_4$ alkyl, substituted or unsubstituted $\text{C}_3\text{-C}_8$ cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl $\text{C}_1\text{-C}_4$ alkyl;

the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1, and the subscript q is 0 to 3;

L^1 is a first linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_6$ alkylene, substituted and unsubstituted $\text{C}_3\text{-C}_6$ cycloalkylene, substituted or unsubstituted arylene and substituted or unsubstituted heteroarylene;

L^2 is a second linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_{12}$ alkylene, substituted and unsubstituted arylene, and combinations thereof; and

A^1 is a member selected from the group consisting of an amino acid, a dipeptide and a dipeptide analog.

- 1 3. The method in accordance with claim 1, wherein R^1 is selected from
2 the group consisting of C_5 - C_{12} cycloalkyl, phenyl and naphthyl.
- 1 4. The method in accordance with claim 1, wherein P^1 is selected from
2 the group consisting of -NHC(O)NH-, -OC(O)NH- and -NHC(O)O-.
- 1 5. The method in accordance with claim 1, wherein the compound has
2 formula (I), wherein P^1 is selected from the group consisting of -NHC(O)NH-, -OC(O)NH-
3 and -NHC(O)O-; P^2 is selected from the group consisting of -C(O)O-, -CH(OH)-, -OC(O)-,
4 -C(O)NH- and -NHC(O)-; m is 0 and L^1 is selected from the group consisting of
5 unsubstituted C_2 - C_6 alkylene.
- 1 6. The method in accordance with claim 1, wherein the compound has
2 formula (I), wherein P^1 is selected from the group consisting of -NHC(O)NH-, -OC(O)NH-
3 and -NHC(O)O-; P^2 is selected from the group consisting of -C(O)O-, -OC(O)-, -C(O)NH-
4 and -NHC(O)-; n and m are each 1; L^1 is selected from the group consisting of unsubstituted
5 C_2 - C_6 alkylene; L^2 is selected from the group consisting of substituted or unsubstituted C_2 - C_6
6 alkylene; and P^3 is selected from the group consisting of -C(O)NHR², -C(O)NHS(O)₂R²,
7 -NHS(O)₂R², and -C(O)OR², wherein R² is a member selected from the group consisting of
8 hydrogen, substituted or unsubstituted C_1 - C_4 alkyl, substituted or unsubstituted C_3 - C_8
9 cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C_1 - C_4 alkyl.
- 1 7. The method in accordance with claim 1, wherein the compound has
2 formula (I), wherein P^1 is selected from the group consisting of -NHC(O)NH-, -OC(O)NH-
3 and -NHC(O)O-; n is 0; m is 1; L^1 is selected from the group consisting of unsubstituted C_2 -
4 C_6 alkylene; L^2 is selected from the group consisting of substituted or unsubstituted C_2 - C_6
5 alkylene; and P^3 is selected from the group consisting of -C(O)NHR², -C(O)NHS(O)₂R²,
6 -NHS(O)₂R², and -C(O)OR², wherein R² is a member selected from the group consisting of
7 hydrogen, substituted or unsubstituted C_1 - C_4 alkyl, substituted or unsubstituted C_3 - C_8
8 cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C_1 - C_4 alkyl.
- 1 8. The method in accordance with claim 1, wherein said compound has
2 formula (II) wherein A^1 is a dipeptide or dipeptide analog.

1 9. The method in accordance with claim 8, wherein A¹ is a dipeptide
2 having an N-terminal residue selected from the group consisting of Tyr, His, Lys, Phe and
3 Trp, and a C-terminal residue selected from the group consisting of Ala, Arg, Asp, Gly, Ile,
4 Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr and Val.

1 10. The method in accordance with claim 1, wherein m is 1 and P³ is
2 selected from those groups that reduce metabolism by esterase dependent inactivation, beta-
3 oxidation, P450-dependent omega hydroxylation or by inhibiting P450 omega hydroxylase.

1 11. The method in accordance with claim 2, wherein R¹ is selected from
2 the group consisting of C₅-C₁₂ cycloalkyl, phenyl and naphthyl.

1 12. The method in accordance with claim 2, wherein P¹ is selected from
2 the group consisting of -NHC(O)NH-, -OC(O)NH- and -NHC(O)O-.

1 13. The method in accordance with claim 2, wherein the compound has
2 formula (I), wherein P¹ is selected from the group consisting of -NHC(O)NH-, -OC(O)NH-
3 and -NHC(O)O-; P² is selected from the group consisting of -C(O)O-, -CH(OH)-,
4 -O(CH₂CH₂O)_q-, -OC(O)-, -C(O)NH- and -NHC(O)-; m is 0 and L¹ is selected from the
5 group consisting of unsubstituted C₂-C₆ alkylene, substituted and unsubstituted C₃-C₆
6 cycloalkylene, and substituted or unsubstituted arylene.

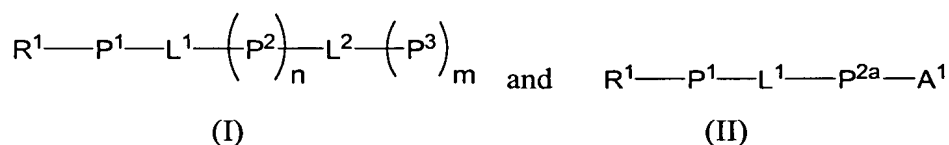
1 14. The method in accordance with claim 2, wherein the compound has
2 formula (I), wherein P¹ is selected from the group consisting of -NHC(O)NH-, -OC(O)NH-
3 and -NHC(O)O-; P² is selected from the group consisting of -C(O)O-, -O(CH₂CH₂O)_q-,
4 -OC(O)-, -C(O)NH- and -NHC(O)-; n and m are each 1; L¹ is selected from the group
5 consisting of unsubstituted C₂-C₆ alkylene, substituted and unsubstituted C₃-C₆
6 cycloalkylene, and substituted or unsubstituted arylene; L² is selected from the group
7 consisting of substituted or unsubstituted C₂-C₆ alkylene; and P³ is selected from the group
8 consisting of C₂-C₆ alkynyl, C₁-C₆ haloalkyl, aryl, heteroaryl, -NHS(O)₂R², -C(O)OR² and
9 carboxylic acid analogs, wherein R² is a member selected from the group consisting of
10 hydrogen, substituted or unsubstituted C₁-C₄ alkyl, substituted or unsubstituted C₃-C₈
11 cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C₁-C₄ alkyl.

15. The method in accordance with claim 2, wherein the compound has formula (I), wherein P^1 is selected from the group consisting of $-NHC(O)NH-$, $-OC(O)NH-$ and $-NHC(O)O-$; n is 0; m is 1; L^1 is selected from the group consisting of unsubstituted C_2-C_6 alkylene, substituted and unsubstituted C_3-C_6 cycloalkylene, and substituted or unsubstituted arylene; L^2 is selected from the group consisting of substituted or unsubstituted C_2-C_6 alkylene; and P^3 is selected from the group consisting of C_2-C_6 alkynyl, C_1-C_6 haloalkyl, aryl, heteroaryl, $-NHS(O)_2R^2$, $-C(O)OR^2$ and carboxylic acid analogs, wherein R^2 is a member selected from the group consisting of hydrogen, substituted or unsubstituted C_1-C_4 alkyl, substituted or unsubstituted C_3-C_8 cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C_1-C_4 alkyl.

16. The method in accordance with claim 2, wherein m is 1 and P^3 is selected from those groups that reduce metabolism by esterase dependent inactivation, beta-oxidation, P450-dependent omega hydroxylation or by inhibiting P450 omega hydroxylase.

17. A method for inhibiting a soluble epoxide hydrolase, comprising contacting said soluble epoxide hydrolase with an inhibiting amount of a compound having the formula described in Tables 1-18 and their pharmaceutically acceptable salts.

18. A method of treating diseases modulated by soluble epoxide hydrolases, said method comprising administering to a subject in need of such treatment an effective amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of C_5-C_{12} cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P^1 is a primary pharmacophore selected from the group consisting of $-NHC(O)NH-$, $-OC(O)NH-$, $-NHC(O)O-$, $-CH_2C(O)NH-$, $-C(O)NH-$ and $-NHC(O)-$;

P^2 is a secondary pharmacophore selected from the group consisting of $-C(O)-$, $-CH(OH)-$, $-C(O)O-$, $-OC(O)-$, $-NHC(O)NH-$, $-OC(O)NH-$, $-NHC(O)O-$, $-C(O)NH-$ and $-NHC(O)-$;

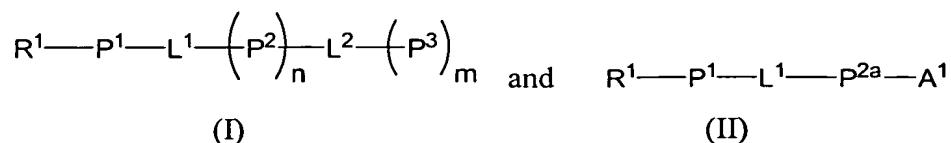
P^{2a} is selected from the group consisting of $-C(O)-$ and $-NHC(O)-$;
 P^3 is a tertiary pharmacophore selected from the group consisting of C_2-C_6 alkynyl,
 C_1-C_6 haloalkyl, aryl, heteroaryl, $-C(O)NHR^2$, $-C(O)NHS(O)_2R^2$,
 $-NHS(O)_2R^2$, $-C(O)OR^2$ and carboxylic acid analogs, wherein R^2 is a member
selected from the group consisting of hydrogen, substituted or unsubstituted
 C_1-C_4 alkyl, substituted or unsubstituted C_3-C_8 cycloalkyl, substituted or
unsubstituted aryl and substituted or unsubstituted aryl C_1-C_4 alkyl;
the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1;
 L^1 is a first linker selected from the group consisting of substituted and unsubstituted
 C_2-C_6 alkylene, substituted or unsubstituted arylene and substituted or
unsubstituted heteroarylene;
 L^2 is a second linker selected from the group consisting of substituted and
unsubstituted C_2-C_{12} alkylene, substituted and unsubstituted arylene, and
combinations thereof; and
 A^1 is a member selected from the group consisting of an amino acid, a dipeptide and a
dipeptide analog.

19. The method in accordance with claim 18, wherein said disease is
selected from the group consisting of hypertension, inflammation, adult respiratory distress
syndrome; diabetic complications; end stage renal disease; Raynaud syndrome and arthritis.

20. The method in accordance with claim 19, wherein said hypertension is
selected from the group consisting of renal hypertension, pulmonary hypertension and hepatic
hypertension.

21. The method in accordance with claim 19, wherein said inflammation is
selected from the group consisting of renal inflammation, vascular inflammation, and lung
inflammation.

22. A method of treating diseases modulated by soluble epoxide
hydrolases, said method comprising administering to a subject in need of such treatment an
effective amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of C_5 - C_{12} cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -CH₂C(O)NH-, -C(O)NH- and -NHC(O)-;

P^2 is a secondary pharmacophore selected from the group consisting of -C(O)-, -CH(OH)-, -O(CH₂CH₂O)_q-, -C(O)O-, -OC(O)-, -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -C(O)NH- and -NHC(O)-;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)-;

P^3 is a tertiary pharmacophore selected from the group consisting of C_2 - C_6 alkynyl, C_1 - C_6 haloalkyl, aryl, heteroaryl, -C(O)NHR², -C(O)NHS(O)₂R², -NHS(O)₂R², -C(O)OR² and carboxylic acid analogs, wherein R² is a member selected from the group consisting of hydrogen, substituted or unsubstituted C_1 - C_4 alkyl, substituted or unsubstituted C_3 - C_8 cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C_1 - C_4 alkyl;

the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1, and the subscript q is 0 to 3;

L^1 is a first linker selected from the group consisting of substituted and unsubstituted C_2 - C_6 alkylene, substituted and unsubstituted C_3 - C_6 cycloalkylene, substituted or unsubstituted arylene and substituted or unsubstituted heteroarylene;

L^2 is a second linker selected from the group consisting of substituted and unsubstituted C_2 - C_{12} alkylene, substituted and unsubstituted arylene, and combinations thereof; and

A^1 is a member selected from the group consisting of an amino acid, a dipeptide and a dipeptide analog.

23. The method in accordance with claim 22, wherein said disease is selected from the group consisting of hypertension, inflammation, adult respiratory distress syndrome; diabetic complications; end stage renal disease; Raynaud syndrome and arthritis.

24. The method in accordance with claim 23, wherein said hypertension is selected from the group consisting of renal hypertension, pulmonary hypertension and hepatic hypertension.

1 25. The method in accordance with claim 23, wherein said inflammation is
2 selected from the group consisting of renal inflammation, vascular inflammation, and lung
3 inflammation.

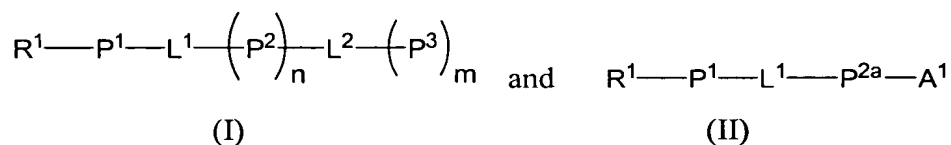
1 26. A method of treating diseases modulated by soluble epoxide
2 hydrolases, said method comprising administering to a subject in need of such treatment an
3 effective amount of a compound having the formula described in Tables 1-18 and their
4 pharmaceutically acceptable salts.

1 27. The method in accordance with claim 26, wherein said disease is
2 selected from the group consisting of hypertension, inflammation, adult respiratory distress
3 syndrome; diabetic complications; end stage renal disease; Raynaud syndrome and arthritis.

1 28. The method in accordance with claim 27, wherein said hypertension is
2 selected from the group consisting of renal hypertension, pulmonary hypertension and hepatic
3 hypertension.

1 29. The method in accordance with claim 27, wherein said inflammation is
2 selected from the group consisting of renal inflammation, vascular inflammation, and lung
3 inflammation.

1 30. A method for reducing renal deterioration in a subject, said method
2 comprising administering to said subject an effective amount of a compound having a
3 formula selected from the group consisting of:



6 and their pharmaceutically acceptable salts, wherein

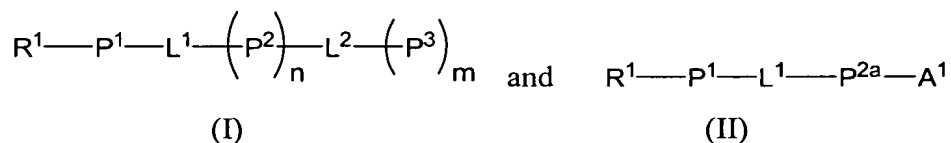
7 R¹ is a member selected from the group consisting of C₅-C₁₂ cycloalkyl, aryl,
8 heteroaryl and combinations thereof, wherein said cycloalkyl portions are
9 monocyclic or polycyclic;

10 P¹ is a primary pharmacophore selected from the group consisting of -NHC(O)NH-,
11 -OC(O)NH-, -NHC(O)O-, -CH₂C(O)NH-, -C(O)NH- and -NHC(O)-;

P^2 is a secondary pharmacophore selected from the group consisting of -C(O)-, -CH(OH)-, -C(O)O-, -OC(O)-, -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -C(O)NH- and -NHC(O)-;
 P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)-;
 P^3 is a tertiary pharmacophore selected from the group consisting of C_2 - C_6 alkynyl, C_1 - C_6 haloalkyl, aryl, heteroaryl, -C(O)NHR², -C(O)NHS(O)₂R², -NHS(O)₂R², -C(O)OR² and carboxylic acid analogs, wherein R² is a member selected from the group consisting of hydrogen, substituted or unsubstituted C_1 - C_4 alkyl, substituted or unsubstituted C_3 - C_8 cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C_1 - C_4 alkyl;
the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1;
 L^1 is a first linker selected from the group consisting of substituted and unsubstituted C_2 - C_6 alkylene, substituted or unsubstituted arylene and substituted or unsubstituted heteroarylene;
 L^2 is a second linker selected from the group consisting of substituted and unsubstituted C_2 - C_{12} alkylene, substituted and unsubstituted arylene, and combinations thereof; and
 A^1 is a member selected from the group consisting of an amino acid, a dipeptide and a dipeptide analog.

31. The method in accordance with claim 30, wherein said renal deterioration is present in said subject afflicted with diabetes, hypertension or an inflammatory disorder.

32. A method for reducing renal deterioration in a subject, said method comprising administering to said subject an effective amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of C_5 - C_{12} cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

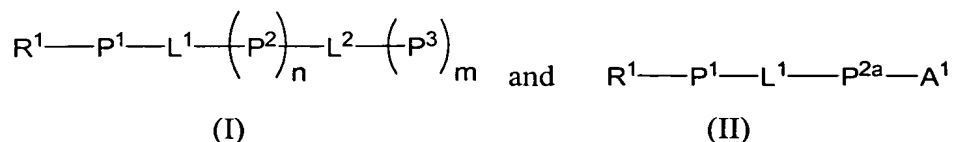
P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH-,
 -OC(O)NH-, -NHC(O)O-, -CH₂C(O)NH-, -C(O)NH- and -NHC(O)-;
 P^2 is a secondary pharmacophore selected from the group consisting of -C(O)-,
 -CH(OH)-, -O(CH₂CH₂O)_q-, -C(O)O-, -OC(O)-, -NHC(O)NH-, -OC(O)NH-,
 -NHC(O)O-, -C(O)NH- and -NHC(O)-;
 P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)-;
 P^3 is a tertiary pharmacophore selected from the group consisting of C₂-C₆ alkynyl,
 C₁-C₆ haloalkyl, aryl, heteroaryl, -C(O)NHR², -C(O)NHS(O)₂R²,
 -NHS(O)₂R², -C(O)OR² and carboxylic acid analogs, wherein R² is a member
 selected from the group consisting of hydrogen, substituted or unsubstituted
 C₁-C₄ alkyl, substituted or unsubstituted C₃-C₈ cycloalkyl, substituted or
 unsubstituted aryl and substituted or unsubstituted aryl C₁-C₄ alkyl;
 the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1,
 and the subscript q is 0 to 3;
 L^1 is a first linker selected from the group consisting of substituted and unsubstituted
 C₂-C₆ alkylene, substituted and unsubstituted C₃-C₆ cycloalkylene, substituted
 or unsubstituted arylene and substituted or unsubstituted heteroarylene;
 L^2 is a second linker selected from the group consisting of substituted and
 unsubstituted C₂-C₁₂ alkylene, substituted and unsubstituted arylene, and
 combinations thereof; and
 A^1 is a member selected from the group consisting of an amino acid, a dipeptide and a
 dipeptide analog.

33. The method in accordance with claim **32**, wherein said renal
 deterioration is present in said subject afflicted with diabetes, hypertension or an
 inflammatory disorder.

34. A method for reducing renal deterioration in a subject, said method
 comprising administering to said subject an effective amount of a compound having the
 formula described in Tables 1-18 and their pharmaceutically acceptable salts.

35. The method in accordance with claim **34**, wherein said renal
 deterioration is present in said subject afflicted with diabetes, hypertension or an
 inflammatory disorder.

36. A method for inhibiting progression of nephropathy in a subject, said method comprising administering to said subject an effective amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of $\text{C}_5\text{-C}_{12}$ cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , $\text{-CH}_2\text{C(O)NH-}$, -C(O)NH- and -NHC(O)- ;

P^2 is a secondary pharmacophore selected from the group consisting of -C(O)- , -CH(OH)- , $\text{-O(CH}_2\text{CH}_2\text{O)}_q\text{-}$, -C(O)O- , -OC(O)- , -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , -C(O)NH- and -NHC(O)- ;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)- ;

P^3 is a tertiary pharmacophore selected from the group consisting of $\text{C}_2\text{-C}_6$ alkynyl, $\text{C}_1\text{-C}_6$ haloalkyl, aryl, heteroaryl, -C(O)NHR^2 , $\text{-C(O)NHS(O)}_2\text{R}^2$, $\text{-NHS(O)}_2\text{R}^2$, -C(O)OR^2 and carboxylic acid analogs, wherein R^2 is a member selected from the group consisting of hydrogen, substituted or unsubstituted $\text{C}_1\text{-C}_4$ alkyl, substituted or unsubstituted $\text{C}_3\text{-C}_8$ cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl $\text{C}_1\text{-C}_4$ alkyl;

the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1, and the subscript q is 0 to 3;

L^1 is a first linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_6$ alkylene, substituted and unsubstituted $\text{C}_3\text{-C}_6$ cycloalkylene, substituted or unsubstituted arylene and substituted or unsubstituted heteroarylene;

L^2 is a second linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_{12}$ alkylene, substituted and unsubstituted arylene, and combinations thereof; and

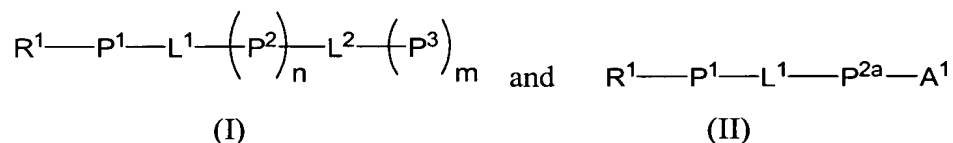
A^1 is a member selected from the group consisting of an amino acid, a dipeptide and a dipeptide analog.

37. The method in accordance with claim 36 wherein the subject is (a) a person with diabetes mellitus whose blood pressure is 130/85 or less, (b) a person with metabolic syndrome whose blood pressure is 130/85 or less, (c) a person with a triglyceride level over 215 mg/dL, or (d) a person with a cholesterol level over 200 mg/dL.

38. A method for inhibiting progression of nephropathy in a subject, said method comprising administering to said subject an effective amount of a compound having the formula described in Tables 1-18 and their pharmaceutically acceptable salts.

39. The method in accordance with claim 38 wherein the subject is (a) a person with diabetes mellitus whose blood pressure is 130/85 or less, (b) a person with metabolic syndrome whose blood pressure is 130/85 or less, (c) a person with a triglyceride level over 215 mg/dL, or (d) a person with a cholesterol level over 200 mg/dL.

40. A method for reducing blood pressure in a subject, said method comprising administering to said subject an effective amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of C_5 - C_{12} cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -CH₂C(O)NH-, -C(O)NH- and -NHC(O)-;

P^2 is a secondary pharmacophore selected from the group consisting of -C(O)-, -CH(OH)-, -O(CH₂CH₂O)_q-, -C(O)O-, -OC(O)-, -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -C(O)NH- and -NHC(O)-;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)-;

P^3 is a tertiary pharmacophore selected from the group consisting of C_2 - C_6 alkynyl, C_1 - C_6 haloalkyl, aryl, heteroaryl, -C(O)NHR², -C(O)NHS(O)₂R², -NHS(O)₂R², -C(O)OR² and carboxylic acid analogs, wherein R² is a member selected from the group consisting of hydrogen, substituted or unsubstituted

20 C₁-C₄ alkyl, substituted or unsubstituted C₃-C₈ cycloalkyl, substituted or
21 unsubstituted aryl and substituted or unsubstituted aryl C₁-C₄ alkyl;
22 the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1,
23 and the subscript q is 0 to 3;
24 L¹ is a first linker selected from the group consisting of substituted and unsubstituted
25 C₂-C₆ alkylene, substituted and unsubstituted C₃-C₆ cycloalkylene, substituted
26 or unsubstituted arylene and substituted or unsubstituted heteroarylene;
27 L² is a second linker selected from the group consisting of substituted and
28 unsubstituted C₂-C₁₂ alkylene, substituted and unsubstituted arylene, and
29 combinations thereof; and
30 A¹ is a member selected from the group consisting of an amino acid, a dipeptide and a
31 dipeptide analog.

1 41. The method in accordance with claim 40, said method further
2 comprising administering to said subject an effective amount of a cis-epoxyeicosantrienoic
3 acid.

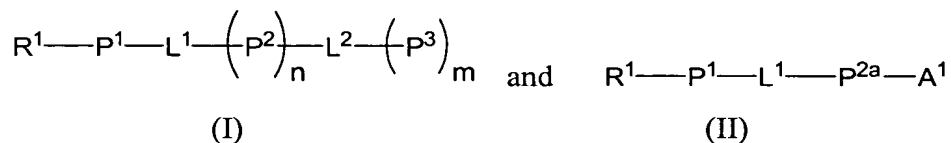
1 42. The method in accordance with claim 41, wherein said cis-
2 epoxyeicosantrienoic acid is administered with said compound having formula (I) or (II).

1 43. A method for reducing blood pressure in a subject, said method
2 comprising administering to said subject an effective amount of a compound having the
3 formula described in Tables 1-18 and their pharmaceutically acceptable salts.

1 44. The method in accordance with claim 43, said method further
2 comprising administering to said subject an effective amount of a cis-epoxyeicosantrienoic
3 acid.

1 45. The method in accordance with claim 44, wherein said cis-
2 epoxyeicosantrienoic acid is administered with said compound having formula (I) or (II).

46. A method of inhibiting the proliferation of vascular smooth muscle cells in a subject, said method comprising administering to said subject an effective amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of $\text{C}_5\text{-C}_{12}$ cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , $\text{-CH}_2\text{C(O)NH-}$, -C(O)NH- and -NHC(O)- ;

P^2 is a secondary pharmacophore selected from the group consisting of -C(O)- , -CH(OH)- , $\text{-O(CH}_2\text{CH}_2\text{O)}_q\text{-}$, -C(O)O- , -OC(O)- , -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , -C(O)NH- and -NHC(O)- ;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)- ;

P^3 is a tertiary pharmacophore selected from the group consisting of $\text{C}_2\text{-C}_6$ alkynyl, $\text{C}_1\text{-C}_6$ haloalkyl, aryl, heteroaryl, -C(O)NHR^2 , $\text{-C(O)NHS(O)}_2\text{R}^2$, $\text{-NHS(O)}_2\text{R}^2$, -C(O)OR^2 and carboxylic acid analogs, wherein R^2 is a member selected from the group consisting of hydrogen, substituted or unsubstituted $\text{C}_1\text{-C}_4$ alkyl, substituted or unsubstituted $\text{C}_3\text{-C}_8$ cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl $\text{C}_1\text{-C}_4$ alkyl;

the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1, and the subscript q is 0 to 3;

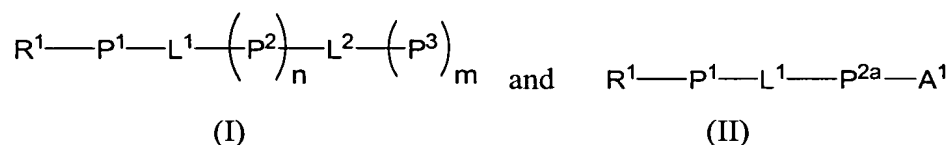
L^1 is a first linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_6$ alkylene, substituted and unsubstituted $\text{C}_3\text{-C}_6$ cycloalkylene, substituted or unsubstituted arylene and substituted or unsubstituted heteroarylene;

L^2 is a second linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_{12}$ alkylene, substituted and unsubstituted arylene, and combinations thereof; and

A¹ is a member selected from the group consisting of an amino acid, a dipeptide and a dipeptide analog.

47. A method of inhibiting the proliferation of vascular smooth muscle cells in a subject, said method comprising administering to said subject an effective amount of a compound having the formula described in Tables 1-18 and their pharmaceutically acceptable salts.

48. A method of inhibiting the progression of obstructive pulmonary disease, an interstitial lung disease, or asthma in a subject, said method comprising administering to said subject an effective amount of a compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R¹ is a member selected from the group consisting of C₅-C₁₂ cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P¹ is a primary pharmacophore selected from the group consisting of -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -CH₂C(O)NH-, -C(O)NH- and -NHC(O)-;

P² is a secondary pharmacophore selected from the group consisting of -C(O)-, -CH(OH)-, -O(CH₂CH₂O)_q-, -C(O)O-, -OC(O)-, -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -C(O)NH- and -NHC(O)-;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)-;

P³ is a tertiary pharmacophore selected from the group consisting of C₂-C₆ alkynyl, C₁-C₆ haloalkyl, aryl, heteroaryl, -C(O)NHR², -C(O)NHS(O)₂R², -NHS(O)₂R², -C(O)OR² and carboxylic acid analogs, wherein R² is a member selected from the group consisting of hydrogen, substituted or unsubstituted C₁-C₄ alkyl, substituted or unsubstituted C₃-C₈ cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C₁-C₄ alkyl;

the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1,

and the subscript q is 0 to 3;

25 L¹ is a first linker selected from the group consisting of substituted and unsubstituted
26 C₂-C₆ alkylene, substituted and unsubstituted C₃-C₆ cycloalkylene, substituted
27 or unsubstituted arylene and substituted or unsubstituted heteroarylene;
28 L² is a second linker selected from the group consisting of substituted and
29 unsubstituted C₂-C₁₂ alkylene, substituted and unsubstituted arylene, and
30 combinations thereof; and
31 A¹ is a member selected from the group consisting of an amino acid, a dipeptide and a
32 dipeptide analog.

1 49. The method in accordance with claim 48, wherein said obstructive
2 pulmonary disease is selected from the group consisting of chronic obstructive pulmonary
3 disease, emphysema, and chronic bronchitis.

1 50. The method in accordance with claim 48, wherein said interstitial lung
2 disease is idiopathic pulmonary fibrosis or is one associated with exposure to dust.

1 51. The method in accordance with claim 48, said method further
2 comprising administering to said subject an effective amount of a cis-epoxyeicosantrienoic
3 acid.

1 52. The method in accordance with claim 51, wherein said cis-
2 epoxyeicosantrienoic acid is administered with said compound having formula (I) or (II).

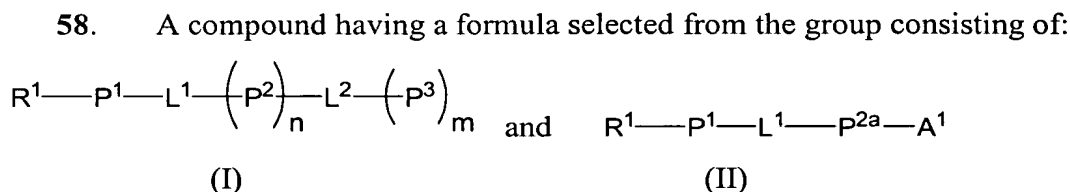
1 53. A method of inhibiting the progression of obstructive pulmonary
2 disease, an interstitial lung disease, or asthma in a subject, said method comprising
3 administering to said subject an effective amount of a compound having the formula
4 described in Tables 1-18 and their pharmaceutically acceptable salts.

1 54. The method in accordance with claim 53, wherein said obstructive
2 pulmonary disease is selected from the group consisting of chronic obstructive pulmonary
3 disease, emphysema, and chronic bronchitis.

1 55. The method in accordance with claim 53, wherein said interstitial lung
2 disease is idiopathic pulmonary fibrosis or is one associated with exposure to dust.

56. The method in accordance with claim 53, said method further comprising administering to said subject an effective amount of a cis-epoxyeicosantrienoic acid.

57. The method in accordance with claim 56, wherein said cis-epoxyeicosantrienoic acid is administered with said compound having formula (I) or (II).



and their pharmaceutically acceptable salts, wherein

R^1 is a member selected from the group consisting of $\text{C}_5\text{-C}_{12}$ cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P^1 is a primary pharmacophore selected from the group consisting of -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , $\text{-CH}_2\text{C(O)NH-}$, -C(O)NH- and -NHC(O)- ;

P^2 is a secondary pharmacophore selected from the group consisting of -C(O)- , -CH(OH)- , -C(O)O- , -OC(O)- , -NHC(O)NH- , -OC(O)NH- , -NHC(O)O- , -C(O)NH- and -NHC(O)- ;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)- ;

P^3 is a tertiary pharmacophore selected from the group consisting of $\text{C}_2\text{-C}_6$ alkynyl, $\text{C}_1\text{-C}_6$ haloalkyl, aryl, heteroaryl, -C(O)NHR^2 , $\text{-C(O)NHS(O)}_2\text{R}^2$, $\text{-NHS(O)}_2\text{R}^2$, -C(O)OR^2 and carboxylic acid analogs, wherein R^2 is a member selected from the group consisting of hydrogen, substituted or unsubstituted $\text{C}_1\text{-C}_4$ alkyl, substituted or unsubstituted $\text{C}_3\text{-C}_8$ cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl $\text{C}_1\text{-C}_4$ alkyl;

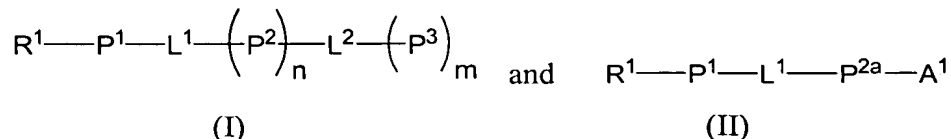
the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1;

L^1 is a first linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_6$ alkylene, substituted or unsubstituted arylene and substituted or unsubstituted heteroarylene;

L^2 is a second linker selected from the group consisting of substituted and unsubstituted $\text{C}_2\text{-C}_{12}$ alkylene, substituted and unsubstituted arylene, and combinations thereof; and

A¹ is a member selected from the group consisting of an amino acid, a dipeptide and a dipeptide analog.

59. A compound having a formula selected from the group consisting of:



and their pharmaceutically acceptable salts, wherein

R¹ is a member selected from the group consisting of C₅-C₁₂ cycloalkyl, aryl, heteroaryl and combinations thereof, wherein said cycloalkyl portions are monocyclic or polycyclic;

P¹ is a primary pharmacophore selected from the group consisting of -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -CH₂C(O)NH-, -C(O)NH- and -NHC(O)-;

P² is a secondary pharmacophore selected from the group consisting of -C(O)-, -CH(OH)-, -O(CH₂CH₂O)_q-, -C(O)O-, -OC(O)-, -NHC(O)NH-, -OC(O)NH-, -NHC(O)O-, -C(O)NH- and -NHC(O)-;

P^{2a} is selected from the group consisting of -C(O)- and -NHC(O)-;

P³ is a tertiary pharmacophore selected from the group consisting of C₂-C₆ alkynyl, C₁-C₆ haloalkyl, aryl, heteroaryl, -C(O)NHR², -C(O)NHS(O)₂R², -NHS(O)₂R², -C(O)OR² and carboxylic acid analogs, wherein R² is a member selected from the group consisting of hydrogen, substituted or unsubstituted C₁-C₄ alkyl, substituted or unsubstituted C₃-C₈ cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C₁-C₄ alkyl;

the subscripts n and m are each independently 0 or 1, and at least one of n or m is 1, and the subscript q is 0 to 3;

L¹ is a first linker selected from the group consisting of substituted and unsubstituted C₂-C₆ alkylene, substituted and unsubstituted C₃-C₆ cycloalkylene, substituted or unsubstituted arylene and substituted or unsubstituted heteroarylene;

L² is a second linker selected from the group consisting of substituted and unsubstituted C₂-C₁₂ alkylene, substituted and unsubstituted arylene, and combinations thereof; and

A¹ is a member selected from the group consisting of an amino acid, a dipeptide and a dipeptide analog.

1 60. The compound in accordance with claim 58, wherein R¹ is selected
2 from the group consisting of C₅-C₁₂ cycloalkyl, phenyl and naphthyl.

1 61. The compound in accordance with claim 58, wherein the compound
2 has formula (I), wherein P¹ is selected from the group consisting of -NHC(O)NH-,
3 -OC(O)NH- and -NHC(O)O-; P² is selected from the group consisting of -C(O)O-,
4 -CH(OH)-, -OC(O)-, -C(O)NH- and -NHC(O)-; n and m are each 1; L¹ is selected from the
5 group consisting of unsubstituted C₂-C₆ alkylene; L² is selected from the group consisting of
6 substituted or unsubstituted C₂-C₆ alkylene; and P³ is selected from the group consisting of
7 -C(O)NHR², -C(O)NHS(O)₂R², -NHS(O)₂R², and -C(O)OR², wherein R² is a member
8 selected from the group consisting of hydrogen, substituted or unsubstituted C₁-C₄ alkyl,
9 substituted or unsubstituted C₃-C₈ cycloalkyl, substituted or unsubstituted aryl and substituted
10 or unsubstituted aryl C₁-C₄ alkyl.

1 62. The compound in accordance with claim 58, wherein the compound
2 has formula (I), wherein P¹ is selected from the group consisting of -NHC(O)NH-,
3 -OC(O)NH- and -NHC(O)O-; n is 0; m is 1; L¹ is selected from the group consisting of
4 unsubstituted C₂-C₆ alkylene; L² is selected from the group consisting of substituted or
5 unsubstituted C₂-C₆ alkylene; and P³ is selected from the group consisting of -C(O)NHR²,
6 -C(O)NHS(O)₂R², -NHS(O)₂R², and -C(O)OR², wherein R² is a member selected from the
7 group consisting of hydrogen, substituted or unsubstituted C₁-C₄ alkyl, substituted or
8 unsubstituted C₃-C₈ cycloalkyl, substituted or unsubstituted aryl and substituted or
9 unsubstituted aryl C₁-C₄ alkyl.

1 63. The compound in accordance with claim 58, wherein said compound
2 has formula (II) wherein A¹ is a dipeptide or dipeptide analog.

1 64. The compound in accordance with claim 58, wherein said compound
2 has formula (II) wherein A¹ is a dipeptide having an N-terminal residue selected from the
3 group consisting of Tyr, His, Lys, Phe and Trp, and a C-terminal residue selected from the
4 group consisting of Ala, Arg, Asp, Gly, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr and
5 Val.

1 65. The compound in accordance with claim 59, wherein R¹ is selected
2 from the group consisting of C₅-C₁₂ cycloalkyl, phenyl and naphthyl.

1 66. The compound in accordance with claim 59, wherein the compound
2 has formula (I), wherein P^1 is selected from the group consisting of $-NHC(O)NH-$,
3 $-OC(O)NH-$ and $-NHC(O)O-$; P^2 is selected from the group consisting of $-C(O)O-$,
4 $-CH(OH)-$, $-O(CH_2CH_2O)_q-$, $-OC(O)-$, $-C(O)NH-$ and $-NHC(O)-$; n and m are each 1; L^1 is
5 selected from the group consisting of unsubstituted C_2-C_6 alkylene, substituted or
6 unsubstituted C_3-C_6 cycloalkylene, and substituted or unsubstituted arylene; L^2 is selected
7 from the group consisting of substituted or unsubstituted C_2-C_6 alkylene; and P^3 is selected
8 from the group consisting of $-C(O)NHR^2$, $-C(O)NHS(O)_2R^2$, $-NHS(O)_2R^2$, and $-C(O)OR^2$,
9 wherein R^2 is a member selected from the group consisting of hydrogen, substituted or
10 unsubstituted C_1-C_4 alkyl, substituted or unsubstituted C_3-C_8 cycloalkyl, substituted or
11 unsubstituted aryl and substituted or unsubstituted aryl C_1-C_4 alkyl.

1 67. The compound in accordance with claim 59, wherein the compound
2 has formula (I), wherein P^1 is selected from the group consisting of $-NHC(O)NH-$,
3 $-OC(O)NH-$ and $-NHC(O)O-$; n is 0; m is 1; L^1 is selected from the group consisting of
4 unsubstituted C_2-C_6 alkylene, substituted or unsubstituted C_3-C_6 cycloalkylene, and
5 substituted or unsubstituted arylene; L^2 is selected from the group consisting of substituted or
6 unsubstituted C_2-C_6 alkylene; and P^3 is selected from the group consisting of C_2-C_6 alkynyl,
7 C_1-C_6 haloalkyl, aryl, heteroaryl, $-C(O)NHR^2$, $-C(O)NHS(O)_2R^2$, $-NHS(O)_2R^2$, $-C(O)OR^2$
8 and carboxylic acid analogs, wherein R^2 is a member selected from the group consisting of
9 hydrogen, substituted or unsubstituted C_1-C_4 alkyl, substituted or unsubstituted C_3-C_8
10 cycloalkyl, substituted or unsubstituted aryl and substituted or unsubstituted aryl C_1-C_4 alkyl.

1 68. The compound in accordance with claim 59, wherein the compound
2 has formula (I) wherein R^1 is a member selected from the group consisting of C_5-C_{12}
3 cycloalkyl, wherein said cycloalkyl portions are monocyclic or polycyclic; P^1 is selected from
4 the group consisting of $-NHC(O)NH-$; P^2 is selected from the group consisting of
5 $-O(CH_2CH_2O)_q-$ and $-C(O)O-$; P^3 is selected from the group consisting of C_2-C_6 alkynyl, C_1-
6 C_6 haloalkyl, aryl, heteroaryl, $-NHS(O)_2R^2$, $-C(O)OR^2$ and carboxylic acid analogs, wherein
7 R^2 is a member selected from the group consisting of hydrogen, substituted or unsubstituted
8 C_1-C_4 alkyl, substituted or unsubstituted C_3-C_8 cycloalkyl, substituted or unsubstituted aryl
9 and substituted or unsubstituted aryl C_1-C_4 alkyl; m is 1 and q is 0 to 3; L^1 is selected from
10 the group consisting of substituted and unsubstituted C_2-C_6 alkylene, substituted and

11 unsubstituted C₃-C₆ cycloalkylene, and substituted or unsubstituted arylene; and L² is
12 selected from the group consisting of substituted and unsubstituted C₂-C₁₂ alkylene.

1 **69.** A compound having the formula described in Tables 1-18 and their
2 pharmaceutically acceptable salts.

1 **70.** A pharmaceutical composition comprising a pharmaceutically
2 acceptable excipient and a compound of claim **58**.

1 **71.** A pharmaceutical composition comprising a pharmaceutically
2 acceptable excipient and a compound of claim **59**.

1 **72.** A pharmaceutical composition comprising a pharmaceutically
2 acceptable excipient and a compound of claim **69**.

1 **73.** A method for stabilizing biologically active epoxides in the presence of
2 a soluble epoxide hydrolase, said method comprising contacting said soluble epoxide
3 hydrolase with an amount of a compound of claim **58**, sufficient to inhibit the activity of said
4 soluble epoxide hydrolase and stabilize said biologically active epoxide.

1 **74.** A method for stabilizing biologically active epoxides in the presence of
2 a soluble epoxide hydrolase, said method comprising contacting said soluble epoxide
3 hydrolase with an amount of a compound of claim **59**, sufficient to inhibit the activity of said
4 soluble epoxide hydrolase and stabilize said biologically active epoxide.

1 **75.** A method for stabilizing biologically active epoxides in the presence of
2 a soluble epoxide hydrolase, said method comprising contacting said soluble epoxide
3 hydrolase with an amount of a compound having the formula described in Tables 1-18 and
4 their pharmaceutically acceptable salts.

1 **76.** The method in accordance with claim **73**, wherein said contacting is
2 conducted in an *in vitro* assay.

1 **77.** The method in accordance with claim **73**, wherein said contacting is
2 conducted *in vivo*.

1 **78.** The method in accordance with claim **74**, wherein said contacting is
2 conducted in an *in vitro* assay.

1 **79.** The method in accordance with claim **74**, wherein said contacting is
2 conducted *in vivo*.

1 **80.** The method in accordance with claim **75**, wherein said contacting is
2 conducted in an *in vitro* assay.

1 **81.** The method in accordance with claim **75**, wherein said contacting is
2 conducted *in vivo*.

1 **82.** The method for reducing the formation of a biologically active diol
2 produced by the action of a soluble epoxide hydrolase, said method comprising contacting
3 said soluble epoxide hydrolase with an amount of a compound of claim **58**, sufficient to
4 inhibit the activity of said soluble epoxide hydrolase and reduce the formation of said
5 biologically active diol.

1 **83.** The method for reducing the formation of a biologically active diol
2 produced by the action of a soluble epoxide hydrolase, said method comprising contacting
3 said soluble epoxide hydrolase with an amount of a compound of claim **59**, sufficient to
4 inhibit the activity of said soluble epoxide hydrolase and reduce the formation of said
5 biologically active diol.

1 **84.** A method for reducing the formation of a biologically active diol
2 produced by the action of a soluble epoxide hydrolase, said method comprising contacting
3 said soluble epoxide hydrolase with an amount of a compound having the formula described
4 in Tables 1-18 and their pharmaceutically acceptable salts.

1 **85.** The method in accordance with claim **82**, wherein said contacting is
2 conducted in an *in vitro* assay.

1 **86.** The method in accordance with claim **82**, wherein said contacting is
2 conducted *in vivo*.

1 **87.** The method in accordance with claim **83**, wherein said contacting is
2 conducted in an *in vitro* assay.

1 **88.** The method in accordance with claim **83**, wherein said contacting is
2 conducted *in vivo*.

1 **89.** The method in accordance with claim **84**, wherein said contacting is
2 conducted in an *in vitro* assay.

1 **90.** The method in accordance with claim **84**, wherein said contacting is
2 conducted *in vivo*.

1 **91.** A method for monitoring the activity of a soluble epoxide hydrolase,
2 said method comprising contacting said soluble epoxide hydrolase with an amount of a
3 compound of claim **58** sufficient to produce a detectable change in fluorescence of said
4 soluble epoxide hydrolase by interacting with one or more tryptophan residues present in the
5 catalytic site of said sEH.

1 **92.** A method for monitoring the activity of a soluble epoxide hydrolase,
2 said method comprising contacting said soluble epoxide hydrolase with an amount of a
3 compound of claim **59** sufficient to produce a detectable change in fluorescence of said
4 soluble epoxide hydrolase by interacting with one or more tryptophan residues present in the
5 catalytic site of said sEH.

1 **93.** A method for monitoring the activity of a soluble epoxide hydrolase,
2 said method comprising contacting said soluble epoxide hydrolase with an amount of a
3 compound having the formula described in Tables 1-18 and their pharmaceutically acceptable
4 salts.

1 **94.** The method in accordance with claim **92**, wherein said compound has
2 an aryl group present one or more components selected from the group consisting of R¹, L²,
3 P³ and A¹.